AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

Listing of Claims:

Claim 1 (Currently Amended): A timing correcting device comprising:

a path detecting unit configured to detect ~~which detects~~ a plurality of path candidates to be tracked from a reception signal, and outputting a [["]]path timing[["]] and a [["]]detection correlation value[["]] corresponding to each path candidate as a result;

a plurality of decision reference generating units that are individually allocated with a result of the detection, configured to generate ~~which generate~~ a predetermined decision standard that is necessary for selecting an optimum path timing from among the timings of the path candidates, based on the allocated information;

an optimum-path selecting unit configured to select ~~which selects~~ an optimum path timing that should be tracked from among the timings of the path candidates, based on a result of the detection and the predetermined decision standard, wherein the plurality of path candidates are selected within a search window that is matched with the reference timing;

a phase-difference calculating unit configured to compare ~~which compares~~ a predetermined reception reference timing given from the outside with the optimum path timing, and calculates a phase difference between the two timings; and

a timing correcting unit configured to correct ~~which corrects~~ the reception reference timing by controlling a clock based on the phase difference.

Claim 2 (Currently Amended): The timing correcting device according to claim 1, wherein

the optimum-path selecting unit ~~has~~ includes a [["]]path selection status[["]], a [["]]forward alignment status[["]], and a [["]]tracking-path holding status[["]] ~~as statuses~~,

during the [["]]path selection status[["]], the timing correcting device selects the optimum path timing from among the path candidates based on the detection correlation value or the predetermined decision standard, and thereafter shifts ~~the~~ a status from the [["]]path selection status[["]] to the [["]]tracking-path holding status[["]],

during the [["]]tracking-path holding status[["]], the timing correcting device compares a result of a detection of a latest path with a timing of a current optimum path thereby to decide whether a path updating processing is to be carried out or not, and carries out the updating processing when a path that satisfies a predetermined updating condition exists as a result of the comparison, and shifts the status from the [[“]]tracking-path holding status[[“]] to the [[“]]forward alignment status[[“]] when paths do not exist within a range of an error of a predetermined number of samples prescribed in advance, and

during the [[“]]forward alignment status[[“]], the timing correcting device holds a current optimum path timing when a path exists within a number of forward alignment stages even when paths do not exist within the range of an error of a predetermined number of samples prescribed in advance, and the timing correcting device shifts the status from the [[“]]forward alignment status[[“]] to the [[“]]path selection status[[“]] when no continuous paths exist over or above a number of forward alignment stages.

Claim 3 (Currently Amended): The timing correcting device according to claim 2, wherein

during the [[“]]path selection status[[“]], the timing correcting device makes each decision reference generating unit has a priority as the predetermined decision standard, and selects a timing of a path allocated to the decision reference generating unit having a highest priority as an optimum path timing.

Claim 4 (Currently Amended): The timing correcting device according to claim 2, wherein

during the [["]]path selection status[["]], the timing correcting device utilizes the detection correlation value as one of the predetermined decision standards, and selects a timing of a path allocated to the decision reference generating unit having a largest detection correlation value as an optimum path timing.

Claim 5 (Currently Amended): The timing correcting device according to claim 2, wherein

during the [["]]path selection status[["]], the timing correcting device makes each of the decision reference generating unit has stability information of a detection correlation value as the predetermined decision standard, and selects a timing of a path allocated to the decision reference generating unit having correlation value stability information of a smallest variation in correlation values, as an optimum path timing.

Claim 6 (Currently Amended): The timing correcting device according to claim 2, wherein

when a path exists within a range of an error of a predetermined number of samples prescribed in advance as a result of a comparison in the [["]]tracking-path holding status[["]], this path satisfies the predetermined updating condition, and the timing correcting device updates the timing of this path as a next optimum path timing.

Claim 7 (Currently Amended): The timing correcting device according to claim 2, wherein

when a plurality of paths exist within a range of an error of a predetermined number of samples prescribed in advance as a result of a comparison in the [["]]tracking-path holding status[["]], a path nearest to a current optimum path timing satisfies the predetermined updating condition, and the timing correcting device updates the timing of this path as a next optimum path timing.

Claim 8 (Currently Amended): The timing correcting device according to claim 2, wherein

when a plurality of paths exist within a range of an error of a predetermined number of samples prescribed in advance and further when two paths exist at both poles and at equal distance from a current optimum path timing as a result of a comparison in the [["]]tracking-path holding status[["]], a path having a higher detection correlation value satisfies the predetermined updating condition, and the timing correcting device updates the timing of this path as a next optimum path timing.

Claim 9 (Currently Amended): The timing correcting device according to claim 2, wherein

when a plurality of paths exist within a range of an error of a predetermined number of samples prescribed in advance and further when two paths exist at both poles and at equal distance from a current optimum path timing as a result of a comparison in the [["]]tracking-path holding status[["]], a path having a tracking polarity direction that is the same as a past tracking direction satisfies the predetermined updating condition, and the timing correcting device updates the timing of this path as a next optimum path timing.

Claim 10 (Currently Amended): The timing correcting device according to claim 2, wherein

each decision reference generating unit ~~has~~ includes a [[“]]path selection status[[“]], a [[“]]backward alignment status[[“]], a [[“]]forward alignment status[[“]], and a [[“]]tracking-path holding status[[“]] ~~as statuses~~,

during the [[“]]path selection status[[“]], the timing correcting device outputs a timing of an allocated path based on a result of the detection, and thereafter shifts the status from the [[“]]path selection status[[“]] to the [[“]]backward alignment status[[“]],

during the [[“]]backward alignment status[[“]], the timing correcting device compares a result of a latest path detection with a timing of a current output path, and shifts the status from the [[“]]backward alignment status[[“]] to the [[“]]path selection status[[“]] when paths do not exist within a range of an error of a predetermined number of samples prescribed in advance, and when a path exists within a range of an error of a predetermined number of samples prescribed in advance and further when paths exist continuously over and above a number of backward alignment stages, the timing correcting device shifts the status from the [[“]]backward alignment status[[“]] to the [[“]]tracking-path holding status[[“]],

during the [[“]]tracking-path holding status[[“]], the timing correcting device compares a result of a detection of a latest path with a timing of a current output path thereby to decide whether a path updating processing is to be carried out or not, and carries out the updating processing when a path exists that satisfies a predetermined updating condition as a result of the comparison, and the timing correcting device shifts the status from the [[“]]tracking-path holding status[[“]] to the [[“]]forward alignment status[[“]] when paths do not exist within a range of an error of a predetermined number of samples prescribed in advance, and

during the [["]]forward alignment status[["]], the timing correcting device holds a current optimum path timing when a path exists within a number of forward alignment stages even when paths do not exist within the range of an error of a predetermined number of samples prescribed in advance, and the timing correcting device shifts the status from the [["]]forward alignment status[["]] to the [["]]path selection status[["]] when no continuous paths exist over or above a number of forward alignment stages.

Claim 11 (Currently Amended): The timing correcting device according to claim 10, wherein

when a path exists within a range of an error of a predetermined number of samples prescribed in advance as a result of a comparison in the [["]]tracking-path holding status[["]], this path satisfies the predetermined updating condition, and the timing correcting device updates the timing of this path as a next output path timing.

Claim 12 (Currently Amended): The timing correcting device according to claim 10, wherein

when a plurality of paths exist within a range of an error of a predetermined number of samples prescribed in advance as a result of a comparison in the [["]]tracking-path holding status[["]], a path nearest to a current output path timing satisfies the predetermined updating condition, and the timing correcting device updates the timing of this path as a next output path timing.

Claim 13 (Currently Amended): The timing correcting device according to claim 10, wherein

when a plurality of paths exist within a range of an error of a predetermined number of samples prescribed in advance and further when two paths exist at both poles and at equal distance from a current output path timing as a result of a comparison in the [["]]tracking-path holding status[["]], a path having a higher detection correlation value satisfies the predetermined updating condition, and the timing correcting device updates the timing of this path as a next output path timing.

Claim 14 (Currently Amended): The timing correcting device according to claim 10, wherein

when a plurality of paths exist within a range of an error of a predetermined number of samples prescribed in advance and further when two paths exist at both poles and at equal distance from a current output path timing as a result of a comparison in the [["]]tracking-path holding status[["]], a path having a tracking polarity direction that is the same as a past tracking direction satisfies the predetermined updating condition, and the timing correcting device updates the timing of this path as a next output path timing.

Claim 15 (Currently Amended): The timing correcting device according to claim 5, wherein

the timing correcting device is configured to calculate ~~calculates~~ the stability information held by each decision reference generating unit by using the detection correlation value, a moving average of variation widths of the detection correlation value, an average of total past variation widths, a moving sum of variation widths, a moving average of detection correlation values, and/or a combination of these values.

Claim 16 (Currently Amended): A timing correcting method comprising:

~~a path detecting step of~~ detecting a plurality of path candidates to be tracked from a reception signal, and outputting a [[“]]path timing[[“]] and a [[“]]detection correlation value[[“]] corresponding to each path candidate as a result;

generating a decision reference ~~generating step of~~ by individually allocating a result of the detection, and generating a predetermined decision standard that is necessary for selecting an optimum path timing from among the timings of the path candidates, based on the allocated information;

~~an optimum-path selecting step of~~ selecting an optimum path timing that should be tracked from among the timings of the path candidates, based on a result of the detection and the predetermined decision standard, wherein the plurality of path candidates are selected within a search window that is matched with the reference timing;

calculating a phase-difference ~~calculating step of~~ by comparing a predetermined reception reference timing given from the outside with the optimum path timing, and calculating a phase difference between the ~~two~~ predetermined reception reference timing and the optimum path timing; and

~~a timing correcting step of~~ correcting the reception reference timing by controlling a clock based on the phase difference.

Claim 17 (Currently Amended): The timing correcting method according to claim 16, wherein

selecting the optimum-path selecting ~~step has~~ includes a [[“]]path selection status[[“]], a [[“]]forward alignment status[[“]], and a [[“]]tracking-path holding status[[“]] ~~as statuses~~,

during the [[“]]path selection status[[“]], the optimum path timing is selected from among the path candidates based on the detection correlation value or the predetermined

decision standard, and thereafter ~~the~~ a status is shifted from the [[“]]path selection status[[“]] to the [[“]]tracking-path holding status[[“]],

during the [[“]]tracking-path holding status[[“]], a result of a detection of a latest path is compared with a timing of a current optimum path thereby to decide whether a path updating processing is to be carried out or not, and the updating processing is carried out when a path exists that satisfies a predetermined updating condition as a result of the comparison, and the status is shifted from the [[“]]tracking-path holding status[[“]] to the [[“]]forward alignment status[[“]] when paths do not exist within a range of an error of a predetermined number of samples prescribed in advance, and

during the [[“]]forward alignment status[[“]], a current optimum path timing is held when a path exists within a number of forward alignment stages even when paths do not exist within the range of an error of a predetermined number of samples prescribed in advance, and the status is shifted from the [[“]]forward alignment status[[“]] to the [[“]]path selection status[[“]] when no continuous paths exist over or above a number of forward alignment stages.

Claim 18 (Currently Amended): The timing correcting method according to claim 17, wherein

generating the decision reference ~~generating step has~~ includes a [[“]]path selection status[[“]], a [[“]]backward alignment status[[“]], a [[“]]forward alignment status[[“]], and a [[“]]tracking-path holding status[[“]] ~~as statuses~~,

during the [[“]]path selection status[[“]], a timing of an allocated path is output based on a result of the detection, and thereafter the status is shifted from the [[“]]path selection status[[“]] to the [[“]]backward alignment status[[“]],

during the [["]]backward alignment status[["]], a result of a latest path detection is compared with a timing of a current output path, and the status is shifted from the [["]]backward alignment status[["]] to the [["]]path selection status[["]] when paths do not exist within a range of an error of a predetermined number of samples prescribed in advance, and when a path exists within a range of an error of a predetermined number of samples prescribed in advance and further when paths exist continuously over or above a number of backward alignment stages, the status is shifted from the [["]]backward alignment status[["]] to the [["]]tracking-path holding status[["]],

during the [["]]tracking-path holding status[["]], a result of a detection of a latest path is compared with a timing of a current output path thereby to decide whether a path updating processing is to be carried out or not, and the updating processing is carried out when a path exists that satisfies a predetermined updating condition as a result of the comparison, and the status is shifted from the [["]]tracking-path holding status[["]] to the [["]]forward alignment status[["]] when paths do not exist within a range of an error of a predetermined number of samples prescribed in advance, and

during the [["]]forward alignment status[["]], a current optimum path timing is held when a path exists within a number of forward alignment stages even when paths do not exist within the range of an error of a predetermined number of samples prescribed in advance, and the status is shifted from the [["]]forward alignment status[["]] to the [["]]path selection status[["]] when no continuous paths exist over or above a number of forward alignment stages.